

## **AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1           1. (Currently amended) A method for facilitating typesafe software design  
2 while supporting structured composition of a software system, comprising:  
3           receiving a first invocation of the software system;  
4           assigning a first context to the first invocation;  
5           examining the first invocation to locate components of the first invocation;  
6           registering a unique factory to build each component, wherein these  
7 factories are registered using the first context;  
8           providing an additional factory for building an extended component of the  
9 first invocation; and  
10          when a component is needed, building the component using the unique  
11 factory associated with the component, whereby building the component after  
12 each component has a registered factory eliminates potential problems with  
13 initialization circularity.

1           2. (Original) The method of claim 1, further comprising:  
2           receiving a second invocation of the software system;  
3           assigning a second context to the second invocation;  
4           examining the second invocation to locate components of the second  
5 invocation;  
6           registering a unique factory to build each component, wherein these  
7 factories are registered using the second context; and

8           when a component is needed, building the component using a factory  
9   associated with the component, whereby building the component after each  
10   component has a registered factory eliminates problems with initialization  
11   circularity.

1           3. (Original) The method of claim 2, wherein components from the second  
2   invocation are not available to the first invocation.

1           4 (Canceled).

1           5. (Original) The method of claim 1, wherein registering the unique  
2   factory to build each component involves placing a key and a related factory  
3   identifier into a storage structure.

1           6. (Original) The method of claim 5, wherein building the component  
2   using the factory associated with the component involves using the key to retrieve  
3   the related factory identifier from the storage structure.

1           7. (Original) The method of claim 6, wherein the storage structure includes  
2   a hash table.

1           8. (Currently amended) A computer-readable storage medium storing  
2   instructions that when executed by a computer cause the computer to perform a  
3   method for facilitating typesafe software design while supporting structured  
4   composition of a software system, ~~wherein the computer-readable storage medium~~  
5   ~~includes magnetic and optical storage devices, disk drives, magnetic tape, CDs~~  
6   ~~(compact discs), and DVDs (digital versatile discs or digital video discs), the~~  
7   method comprising:

8 receiving a first invocation of the software system;  
9 assigning a first context to the first invocation;  
10 examining the first invocation to locate components of the first invocation;  
11 registering a unique factory to build each component, wherein these  
12 factories are registered using the first context;  
13 providing an additional factory for building an extended component of the  
14 first invocation; and  
15 when a component is needed, building the component using the unique  
16 factory associated with the component, whereby building the component after  
17 each component has a registered factory eliminates potential problems with  
18 initialization circularity.

1 9. (Original) The computer-readable storage medium of claim 8, the  
2 method further comprising:  
3 receiving a second invocation of the software system;  
4 assigning a second context to the second invocation;  
5 examining the second invocation to locate components of the second  
6 invocation;  
7 registering a unique factory to build each component, wherein these  
8 factories are registered using the second context; and  
9 when a component is needed, building the component using a factory  
10 associated with the component, whereby building the component after each  
11 component has a registered factory eliminates problems with initialization  
12 circularity.

1 10. (Original) The computer-readable storage medium of claim 9, wherein  
2 components from the second invocation are not available to the first invocation.

1           11 (Canceled).

1           12. (Original) The computer-readable storage medium of claim 8, wherein  
2     registering the unique factory to build each component involves placing a key and  
3     a related factory identifier into a storage structure.

1           13. (Original) The computer-readable storage medium of claim 12,  
2     wherein building the component using the factory associated with the component  
3     involves using the key to retrieve the related factory identifier from the storage  
4     structure.

1           14. (Original) The computer-readable storage medium of claim 13,  
2     wherein the storage structure includes a hash table.

1           15-21 (Canceled).